

an impedance measurement circuit electrically connected to the load for producing a measurement indicative of the electrical impedance;

an RF output stage connected to the load for applying output power to the load, the RF output stage having an RF input stage for adjusting the RMS value;

a controller electrically connected to the impedance measurement circuit and electrically connected to the input, wherein the controller has means for inducing multiple oscillations of the electrical impedance by adjusting the input in response to the measurement, wherein the application of output power occurs at a frequency lower than that of radio frequencies.

2. (Twice amended) The apparatus of claim 1 wherein the frequency at which the induced multiple oscillations of the impedance occurs is in [the] a frequency range of one to twenty hertz.

8. (Twice amended) An electrosurgical generator for treating tissue, the electrosurgical generator electrically connected in a circuit with the tissue for applying an output power to the tissue from an output stage, the tissue presenting a variable impedance to the output power, the electrosurgical generator comprising:

an impedance measuring circuit electrically connected in circuit with the tissue for producing a measurement of the variable impedance; and

a feedback control system in the electrosurgical generator for adjusting the output power, the feedback control system connected to the impedance measuring circuit and

connected to the output stage for cyclically changing the output power in response to the measurement to cause the variable impedance to cyclically rise and fall;

wherein the cyclic changing of the output power occurs at a frequency lower than that of radio frequencies.

9. (Twice amended) A method for automatically controlling electrosurgical output power across a load, the load having a variable impedance, the method comprising the steps of:

generating electrosurgical output power, the output power having an RMS value;

connecting the output power across the load;

producing a measurement of the variable impedance; and

controlling the output power in response to the measurement by cyclically raising and lowering the RMS value at a frequency lower than that of radio frequencies [being within a frequency range of 1-20 hertz (Hz)], wherein the measurement follows the RMS value.

15. (Twice amended) A method for automatically controlling output power from an electrosurgical generator across a load, the load having a variable impedance and a thermal frequency bandwidth, the method comprising the steps of:

generating electrosurgical output power, the output power having an RMS value;

connecting the output power across the load;

continuously measuring the variable impedance of the load; and

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Cont.
inducing multiple oscillations of the load impedance by repeatedly raising and lowering the RMS value in response to the measured impedance,

wherein said step of inducing is performed at a frequency within the thermal frequency bandwidth, said thermal frequency bandwidth being lower than radio frequencies.

Please add new claims 18-25.

7 --18. (New) The electrosurgical generator as claimed in claim 1, wherein the frequency for the application of output power is less than 100kHz.

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19. (New) The electrosurgical generator as claimed in claim 8, wherein the frequency for the cyclic changing of the output power is less than 100kHz.

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20. (New) The method of claim 9, wherein said step of controlling the output power is performed at a frequency less than 100kHz.

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21. (New) The method as claimed in claim 15, wherein an upper limit of the thermal frequency bandwidth is less than 100kHz.

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22. (New) The electrosurgical generator as claimed in claim 18, wherein the frequency for the application of output power is in a range of 1-20 Hz.